IHSDM — Safety Is Our Middle Name

A product of the Federal Highway Administration's Safety Research and Development Program, IHSDM's software analysis tools help individuals involved in the highway design process evaluate the safety and operational effects of geometric design decisions, ensuring that the highways of today and tomorrow are as safe as possible.

Tools for Today's Highway Project Development Environment

Citizens today want agencies to create context-sensitive designs, yet demand that safety not be compromised in the process. IHSDM evaluates design policy and safety for existing and proposed designs, and helps agencies make, justify, and defend geometric design decisions in this environment.

Important Information in One Place

Information on the safety and operational effects of highway geometric design is scattered throughout research literature. Highway project decisionmakers have difficulty accessing and applying this information, which seriously limits its usefulness. IHSDM assembles this knowledge into a more convenient and usable format, enabling more explicit and quantitative consideration of the safety and operational implications of geometric design decisions throughout the highway design process. Intended users include project managers, planners, designers, traffic engineers, and safety reviewers.

Visit Us on the Web

For details and updates on the release of IHSDM, visit the IHSDM Web site, **http://www.tfhrc.gov/safety/ihsdm/ihsdm.htm**.

The Web site also includes information about training and technical support, and links to current research and other resources.

Whom Can I Contact for Additional Information?

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IHSDM

Interactive Highway Safety Design Model

IHSDM
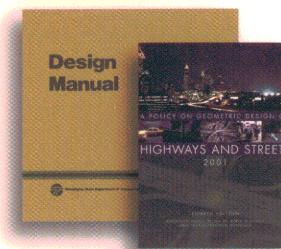
Safer
Roads
Through
Better
Design

U.S. Department of Transportation
Federal Highway Administration

IHSDM

A Suite of Evaluation Modules Offers Comprehensive Assessment Capabilities

There are five evaluation modules in the public release of IHSDM for two-lane rural highways. Research and development efforts are underway to add evaluation capabilities for multilane rural highways and urban and suburban arterials.
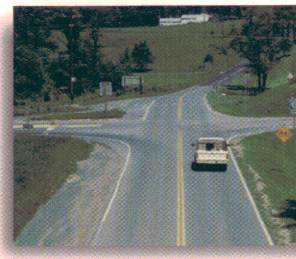
Policy Review Module

This module checks roadway segment design elements against relevant highway geometric design policies. Project designers and reviewers can use it to compare existing roadway geometric designs with current design guidelines, or to perform quality-assurance checks throughout detailed design and design review stages.

Crash Prediction Module

The Crash Prediction Module estimates the expected crash frequency on a roadway using geometric design and traffic characteristics. This helps users evaluate an existing roadway, compare the relative safety performance of design alternatives, and assess the safety cost-effectiveness of design decisions.

Design Consistency Module

The Design Consistency Module estimates the magnitude of potential speed inconsistencies to help identify and diagnose safety concerns at horizontal curves. These evaluations also provide quality-assurance checks of preliminary and final alignment designs.

Intersection Review Module

This module contains both policy and diagnostic review capabilities. The policy review component will check intersection design elements relative to design policy. The diagnostic review component systematically evaluates an existing or proposed intersection geometric design to identify potential safety concerns and suggest possible treatments to address those concerns.

Traffic Analysis Module

This module is particularly useful during project scoping and preliminary engineering to evaluate the operational performance of alternatives to two-lane cross sections, including passing lanes, climbing lanes, and short four-lane sections. It uses the TWOPAS traffic simulation module to estimate traffic quality-of-service measures for an existing or proposed design under current or projected future traffic flows.